01789921 **Image available**
DRIVING METHOD OF LIQUID CRYSTAL ELEMENT

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ABSTRACT

PURPOSE: To display an image plane consisting of many picture elements at a high speed by applying a scanning signal and a display signal to the drain or source and gate of an FET corresponding to a picture element where ferroelectric liquid crystal is charged respectively and performing the 1st writing operation, and applying a display signal for the 2nd writing.

CONSTITUTION: Ferroelectric liquid crystal which has a bistable state to an electric field is charged between picture element electrodes which have FETs corresponding to respective picture elements and a counter electrode, thus constituting the liquid-crystal element. Drains or sources of the FETs which constitute an active matrix are connected to scanning electrodes 6, gates are connected to display electrodes 7, and the counter electrode is a common electrode. A scanning signal is applied to an electrode 6 and a display signal is applied to a display electrode 7 to control the array of the liquid crystal, writing a display state based upon the 1st orientation state. Then, a specific display signal is applied to an electrode 7 to write the 2nd orientation state, thus driving the liquid crystal on a time-division basis. Consequently, a display of an image plate consisting of many picture elements is made at a high speed.

This seems to correspond to JP61-4021. Would you confirm ?

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Liquid crystal display element - uses field-effect transistor drivers for bi-state ferro-electric liquid crystal display cells

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Abstract (Basic): FR 2563649 A

(+11.6.84 (5), 19.6.84 (9), 22.6.84 (5), 26.6.84 (2) -JP- 118183-6, 118190, 124511-9, 127415-9, 129999, 130000) (1482AH) The display is made up of multiple field effect transistors each having a gate (34) and first and second terminals (18, 21); a first substrate (30) carrying an assembly of electrodes for the image element (22), each of which is connected to an associated transistor; a second substrate (30a) carrying counter electrodes (31) situated facing the electrodes of the image element; and a ferro-electric liquid crystal (33) which has two stable orientation states and which is interposed between the two substrates.

The image cells are arranged in a matrix format which is supplied with the image data in a time multiplexed form, the demultiplexed signals being applied to the gate of the field effect transistors which drive the image cell.

USE/ADVANTAGE - Improved image resolution, increased image update speed, image memory, and increased display area in liquid crystal displays.

Title Terms: LIQUID; CRYSTAL; DISPLAY; ELEMENT; FIELD; EFFECT; TRANSISTOR; DRIVE; BI; STATE; FERRO; ELECTRIC; LIQUID; CRYSTAL; DISPLAY; CELL

Derwent Class: P85; T04; U14

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